In the Claims

The following amendments are made with respect to the claims in the International application PCT/EP2005/000923.

This listing of claims will replace all prior versions and listings of claims in this application.

1 (currently amended). ~~Method~~ A method for producing sorbicillactone A ~~or derivatives~~ and/or a derivative thereof, comprising the steps of:

a) culturing a fungus of the genus *Penicillium* at 20-25 °C in a suitable growth medium at a salt concentration of 2-5 % until the formation of a compact surface mycelium,

b) ~~Increasing~~ increasing the temperature to 28-35°C and further incubation for 5-10 days,

c) ~~Separating~~ separating the culture broth from the mycelium, and

d) ~~Extracting of~~ extracting sorbicillactone A ~~and derivatives~~ and/or a derivative thereof from the culture medium, and optionally,

e) ~~Underlaying of~~ underlaying the mycelium with fresh medium with a reduced salt concentration of ~~0,5-1,5~~ 0.5-1.5 % and incubation at 28-35°C for 3-8 days,

f) ~~Repeating of~~ repeating step c) and d), and optionally,

g) ~~Repeating of~~ repeating steps e) to f), and

h) ~~Extracting of~~ extracting sorbicillactone A ~~and derivatives~~ and/or a derivative thereof from the culture medium and/or the mycelia.

2 (currently amended). ~~Method~~ The method according to claim 1, wherein the fungus is *Penicillium chrysogenum*~~, in particular the strain KIP 3201~~.

3 (currently amended). ~~Method~~ The method according to ~~any of the preceding claims~~ claim 1, wherein ~~different additives can be added to the suitable growth media, such as, for example,~~ one or more additives selected from the group consisting of pyruvate, glutamate, proline, acetate, sorbicilline [[or]] and other biosynthetic precursors of sorbicillactone A is/are added to the growth media.

4 (currently amended). ~~Method according to any of the preceding claims~~ The method according to claim 1, wherein the production takes place in a flat bed method.

5 (currently amended). ~~Method according to any of the preceding claims~~ The method according to claim 1, wherein the inoculum is a solid-state-bound form of the fungus.

6 (currently amended). ~~Method~~ The method according to claim 5, wherein the solid ~~states~~ state to which the fungus is bound [[are]] is a floatable solid state~~states, e.g. grains or styrofoam globes~~.

7 (currently amended). ~~Method according to any of the preceding claims~~ The method according to claim 1, wherein a carrier device for a stabilisation of the surface mycelium is introduced into the culture vessel.

8 (currently amended). ~~Method~~ The method according to claim 7, wherein the carrier device is a mesh.

9 (currently amended). ~~Method according to any of the preceding claims~~ The method according to claim 1, wherein sorbicillactone A ~~or derivatives~~ and/or a derivative thereof are extracted from the fungal mycelium that is separated from the culture medium by the addition [[with]] of ethyl acetate.

10 (currently amended). ~~Method according to any of claims 1-8~~ The method according to claim 1, wherein sorbicillactone A ~~or derivatives~~ and/or a derivative thereof ~~are immediately~~ is bound from the culture medium to a solid exchanger, and [[are]] purified further from this bound form.

11 (currently amended). ~~Method~~ The method according to claim 10, wherein the solid exchanger is the exchange resin Amberlite XAD-16.

12 (currently amended). ~~Method~~ The method according to claim 10[[or 11]], wherein the solid exchanger as loaded is filtered off from the medium, and sorbicillactone A ~~or derivatives thereof are~~ and/or a derivative thereof is eluted with organic solvents.

13 (currently amended). ~~Method~~ The method according to claim 12, ~~wherein the~~ which utilizes one or more organic solvents [[are]] selected from the group consisting of methanol, ethanol, ethyl acetate, heptane [[or]] and acetonitrile.

14 (currently amended). ~~Method according to one of claims 10-13~~ The method according to claim 10, wherein sorbicillactone A ~~or derivatives thereof are~~ and/or a derivative thereof is acid-extracted from the crude extract with one or more organic solvents.

15 (currently amended). ~~Method~~ The method according to claim 14, wherein the crude extract is brought to a pH of 2 with phosphoric acid, and is subsequently extracted with ethyl acetate.

16 (currently amended). ~~Method according to any of the preceding claims~~ The method according to claim 1, wherein a purification of the extracts occurs by means of FCPC (Fast Centrifugal Partitioning Chromatography).

17 (currently amended). ~~Method~~ The method according to claim 16, ~~wherein~~ comprising the use of a mixture of solvents from heptane, ethyl acetate, methanol, and water with an addition of 1 ml/L of concentrated phosphoric acid at a flow of 6-7 mL/min, and number of revolutions of 1200 revolutions per min, and wherein the upper is used as stationary phase~~, is used~~.

18 (currently amended). ~~Method according to any of the preceding claims~~ The method according to claim 1, wherein a purification of the extract occurs by gel chromatography on Sephadex LH-20 using an organic solvent.

19 (currently amended). ~~Method~~ The method according to claim 18, wherein sorbicillactone A is eluated with methanol.

20 (currently amended). ~~Method~~ A method for producing [[of]] sorbicillactone-A-methyl ester, comprising the steps of:

a) ~~Producing of~~ producing sorbicillactone A ~~as described in claims 1-19~~, by a method comprising the steps of:

i) culturing a fungus of the genus *Penicillium* at 20-25 °C in a suitable growth medium at a salt concentration of 2-5 % until the formation of a compact surface mycelium,

ii) increasing the temperature to 28-35°C and further incubation for 5-10 days,

iii) separating the culture broth from the mycelium, and

iv) extracting sorbicillactone A from the culture medium, and optionally,

v) underlaying the mycelium with fresh medium with a reduced salt concentration of 0.5-1.5 % and incubation at 28-35°C for 3-8 days,

vi) repeating step c) and d), and optionally,

vii) repeating steps e) to f), and

viii) extracting sorbicillactone A from the culture medium and/or the mycelia,

b) ~~Treating of~~ treating sorbicillactone A dissolved in methanol with concentrated sulphuric acid,

c) ~~Stirring~~ stirring at room temperature for 6 h,

d) ~~Adding of~~ adding water,

e) ~~Extracting~~ extracting with ethyl acetate,

f) ~~Evaporating~~ evaporating the organic phases in vacuo, and

g) ~~Purifying of~~ purifying the residual by preparative HPLC.

21 (currently amended). ~~Method~~ A method for producing a pharmaceutical composition, comprising the steps of:

a) ~~Producing~~ producing [[von]] sorbicillactone A ~~or derivatives thereof as described in the claims 1-19~~ and/or a derivative thereof by a method comprising the steps of:

i) culturing a fungus of the genus *Penicillium* at 20-25 °C in a suitable growth medium at a salt concentration of 2-5 % until the formation of a compact surface mycelium,

ii) increasing the temperature to 28-35°C and further incubation for 5-10 days,

iii) separating the culture broth from the mycelium, and

iv) extracting sorbicillactone A and/or a derivative thereof from the culture medium, and optionally,

v) underlaying the mycelium with fresh medium with a reduced salt concentration of 0.5-1.5 % and incubation at 28-35°C for 3-8 days,

vi) repeating step iii) and iv), and optionally,

vii) repeating steps v) to vi), and

viii) extracting sorbicillactone A and/or a derivative thereof from the culture medium and/or the mycelia, and

b) ~~Formulating of~~ forumulating a pharmaceutical composition ~~using~~ by combining the sorbicillactone A and/or a derivative thereof obtained in step a) with pharmaceutically acceptable auxiliary agents and additives.

22 (currently amended). ~~Method~~ The method for producing a pharmaceutical according to claim 21, characterized in that sorbicillactone A ~~or derivatives thereof are~~ and/or a derivative thereof is present in an amount, so that a ~~range of concentrations~~ concentration between 0.3 and 30 μg/ml is present upon [[the]] treatment in vivo.

23 (currently amended). ~~Use of~~ A method for triggering apoptosis in diseased cells; or treating leukaemia, neurodegenerative diseases, and/or bacterial or fungal infections, wherein said method comprises administering sorbicillactone A ~~or derivatives~~ and/or a derivative thereof ~~as triggering agent of apoptosis in diseased cells, in particular tumour cells~~.

24 (currently amended). ~~Use of sorbicillactone A or derivatives thereof in~~ The method, according to claim 23, for the treatment of leukaemia.

25 (currently amended). ~~Use of sorbicillactone A or derivatives thereof in~~ The method, according to claim 23, for the treatment of a neurodegenerative ~~diseases~~ disease.

26 (currently amended). ~~Use of sorbicillactone A or derivatives thereof in~~ The method, according to claim 23, for the treatment of bacterial and fungal infections.

27 (currently amended). ~~Fungal~~ A fungal strain of the genus *Penicillium chrysogenum* KIP 3201 with the deposit number DSM 16137.

28 (new). The method, according to claim 2, wherein said fungus is strain KIP 3201.